A2B

weareA2B.com

Owner's Manual

Octave

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1.0 Introduction

Welcome and congratulations on buying your new A2B Octave*, the electric bike that's taking transport in a whole new direction.
Your bike will give you the freedom to go your own way.

It's the revolutionary way to get to work, pop to the shops or just get some fresh air.
Compared to jumping in the car, it's a lot more fun, easier to park and will reduce your fuel costs as well as your impact on the environment... as you'll soon find out!

Hero Eco

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*' A2B Octave is termed as'A2B throughout the rest of this manual.

2.0 Important information

This owner manual contains important safety, performance and service information.
Please ensure you read this thoroughly before your first ride.

Your A2B should be fully assembled and the battery charged by your A2B dealer at the time of delivery.
If not contact us immediately as this will void your warranty.

Please ensure that all users of your A2B read and understand the following important information.

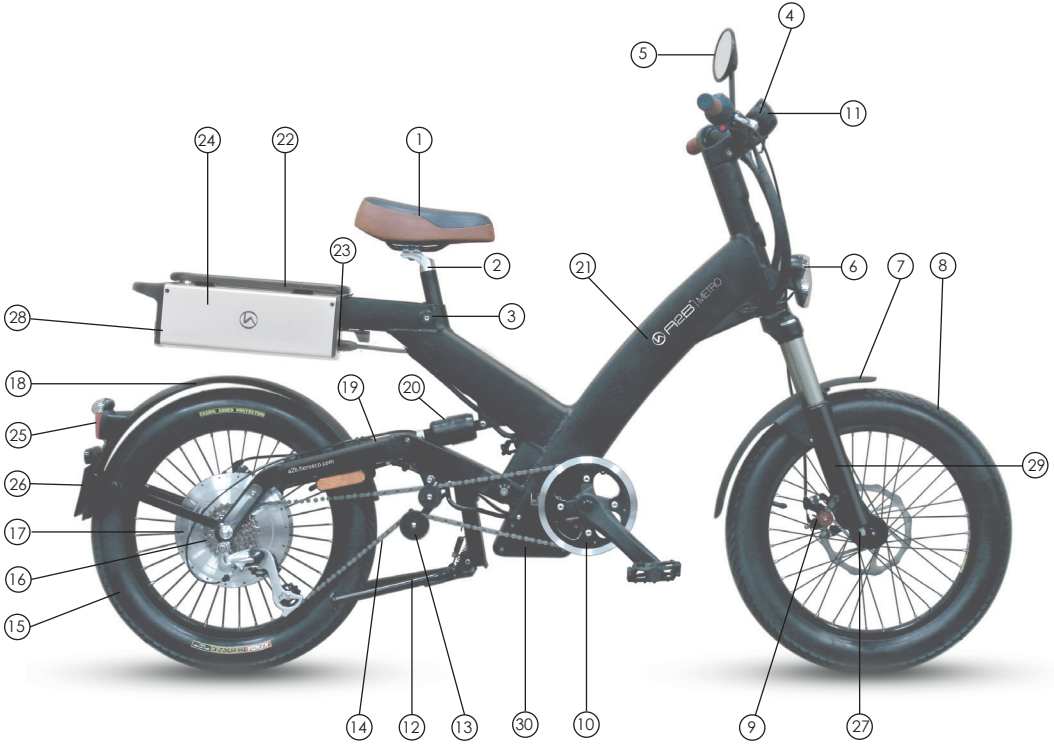
- The A2B is designed for public road use. Don't ride off-road, in water and don't use the A2B to jump in bumby terrain or for competition events.
- We recommend that you always wear an approved cycle helmet at all times and light or fluorescent clothing at night when riding the A2B.
- Make sure you know and practice the rules of safe and responsible riding. There is always a risk of serious / fatal injury or damage as a result of an accident while riding an A2B. By choosing to ride the A2B you assume responsibility for that risk.
- Your existing insurance policies may not provide accident cover for your A2B. Contact your insurance company or agent for information.
- This owner's manual makes no representation about the safe use of the A2B under all conditions.

Important symbols

⚠	This indicates a potentially hazardous situation which, if not avoided, could result in a serious injury, property damage or damage to equipment or inadvertent system failure.
ⓘ	Provides helpful or other important related information.

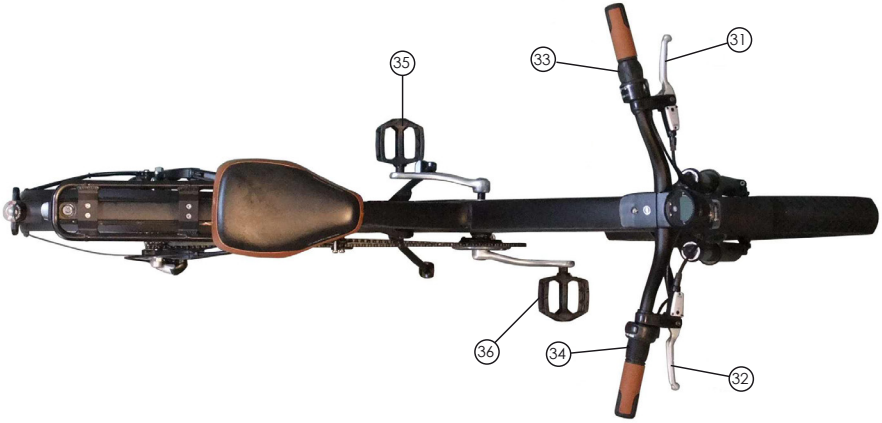
3.0 Your A2B

3.1 Components



***NOTE:** When we refer to the 'right side' and the 'left side' of the A2B. For clarification, 'left' and 'right' are relative to your position when sitting on the A2B in the normal riding position.

1. Saddle (seat)
2. Seat post
3. Seat post clamp
4. Key switch
5. Rear view mirror
6. Head light
7. Front mud guard
8. Front wheel/tire
9. Front disk brake and rotor
10. Crank arm and chain ring
11. Display
12. Kickstand
13. Chain tensioner
14. Drive chain
15. Rear wheel/tire
16. 7-speed derailleur and freewheel
17. Hub motor
18. Rear mud guard
19. Swing arm
20. Rear shock absorber
21. Down tube battery
22. Rear rack
23. Battery connector
24. Rack battery (option)
25. Tail light
26. License plate holder
27. Quick release
28. On/ Off switch rack battery
29. Front fork
30. Controller



31. Left brake lever
(operates front brake)
32. Right brake lever
(operates rear brake)
33. 7-speed twist shifter
34. Throttle grip
35. Left pedal
36. Right pedal

4.0 Unpacking

NOTE: Your A2B weighs 37.2 kg (82 lb).
LIFT WITH CARE. Two people are recommended.

4.1 Tools and equipment

- Pliers
- Side cutters (for cutting cable ties used to pack the A2B)
- Blanket or tarpaulin (to avoid scratching unprotected surfaces on the A2B whilst unpacking)

4.2 Delivered fully assembled and battery charged

Your A2B should be fully assembled and the battery charged by your A2B dealer at the time of delivery. If not contact us immediately as this will void your warranty. However, if you need to unpack your A2B, follow these instructions:

1. Carefully open the flaps at the top of the carton. Remove all staples (with pliers if necessary), to avoid the possibility of scratching yourself or your A2B.

2. Carefully lift the A2B out of the carton. Two people are recommended.

3. Lay the A2B on a tarpaulin or blanket to avoid scratching any unprotected surface whilst you remove the packing materials.

4. Remove the accessory boxes from the carton.

5. Using the side cutters, clip the cable ties that hold various components to the frame. ONLY clip those cable ties that are used to attach components to the frame or prevent movement during shipment (and NOT those trimmed of excess length).

⚠ The A2B has cable ties that manage electrical and control cable routing (and ARE trimmed of excess length). **DO NOT** clip these cable ties as they are necessary for the safe operation of the vehicle.

6. Remove all of the protective wrapping from the A2B and dispose of the packaging responsibly.

The battery and charger should be tested when received. If the battery or charger is damaged in any way, a claim should be filed with the carrier. A full report of the damage should be obtained by the claim agent, and this report should be forwarded to Hero Eco. Hero Eco will advise the action required and arrange for repair or replacement.

ⓘ Charge the battery for at least 12 hours before using the A2B for the first time. See 6.2 & 6.3.

4.3 Installing the handlebar and display

1. Using a 4 mm allen key, unscrew the three bolts that hold the handlebar clamp to the handlebar stem (pic a). Remove the cap from the handlebar stem.

2. Install the steering stopper. Ensure the stopper that the stopper will not touch the steering tube. Tighten the bolts to 6 Nm (pic b).

3. Nest the handlebar into the handlebar stem, ensuring that it is centred and properly oriented. Replace the cap, reinstall the bolts holding the cap to the stem and tighten securely the bolts to 6 Nm per bolt (pic c).

ⓘ It is essential to tighten all three bolts evenly to ensure proper installation.

⚠ The bolt located on the top of the stem should be tightened to no more than 1 Nm. The left side bolt on the bar stem must be tightened to 10-12 Nm.

4. Install the display and tighten the bolts to 6 Nm per bolt (pic d).

5. Install the key lock and tighten the bolt to 3 Nm (pic e).

ⓘ The 'Nm' measurements refer to the torque value that should be applied to the tightening of bolts, please use an appropriate spanner to apply the correct torque values as specified.

4.4 Installing the pedals

1. Lightly coat the threads of the pedal axle with light grease. This will make screwing the pedal into the crank arm easier, and will help prevent corrosion in the future.

2. Two pedals (a left pedal and a right pedal) are supplied. Each pedal is DIFFERENT. There is an 'R' stamped on the spindle of the right-hand pedal, and there is an 'L' stamped on the spindle of the left-hand pedal.

3. Install the right pedal on the right-hand side, and the left pedal on the left-hand side. It is very important that each pedal is installed on the correct side.

CAUTION: Attempting to screw the left pedal into the right crank arm (or vice versa) will damage the internal threads of the crank arm. This damage is not 'fixable' and the crank arm will have to be replaced.

4. When installing the right pedal, screw the threaded section of the pedal spindle into the crank arm turning the spindle in a CLOCKWISE direction.

5. When installing the left pedal, screw the threaded section of the pedal spindle into the crank arm turning the spindle in a ANTI-CLOCKWISE direction.

6. Screw each pedal as far as you can into the crank arm with your fingers.

7. Using a 15 mm open end spanner, securely tighten the pedals.

8. Ensure the pedals are installed with a torque value of 30 Nm.

⚠ An improperly installed pedal may fall off your A2B whilst in use. This may cause an accident resulting in serious injury or death and property damage. Ensure that your pedals are properly installed and tight before each ride.

4.5 Changing components or adding accessories

Before installing any component or accessory, including a different tyre, make sure that it is compatible with your A2B by checking with your A2B dealer.

Read, understand and follow the instructions that accompany the component or accessory you purchase for your A2B. Follow the component manufacturer's instructions if they conflict with these instructions.

⚠ As with all mechanical components, the bicycle is subjected to wear and high stresses. Different materials and components may react in different ways to wear or stress fatigue. If the design life of a component has been exceeded, it may suddenly fail possibly causing serious or fatal injuries to the rider. Any form of crack, scratches or change of colouring in highly stressed areas, such as frame, fork and handle bar, indicates that the life of the component has been reached and it should be replaced immediately by an A2B dealer.

⚠ Failure to confirm with compatibility, proper installation, operation and maintainance components or accessorys can result in serious or fatal injury.

⚠ Using non-genuine components or replacement parts may compromise the safety of your A2B and void the warranty.

ⓘ If you change components or add accessories, you do so at your own risk because Hero Eco may not have tested that component or accessory for compatibility, reliability or safety on your A2B.

4.6 Brake lever adjustment

Can you comfortably operate the brakes? If not, take your A2B to an A2B dealer and ask them to adjust the angle of the brake levers.

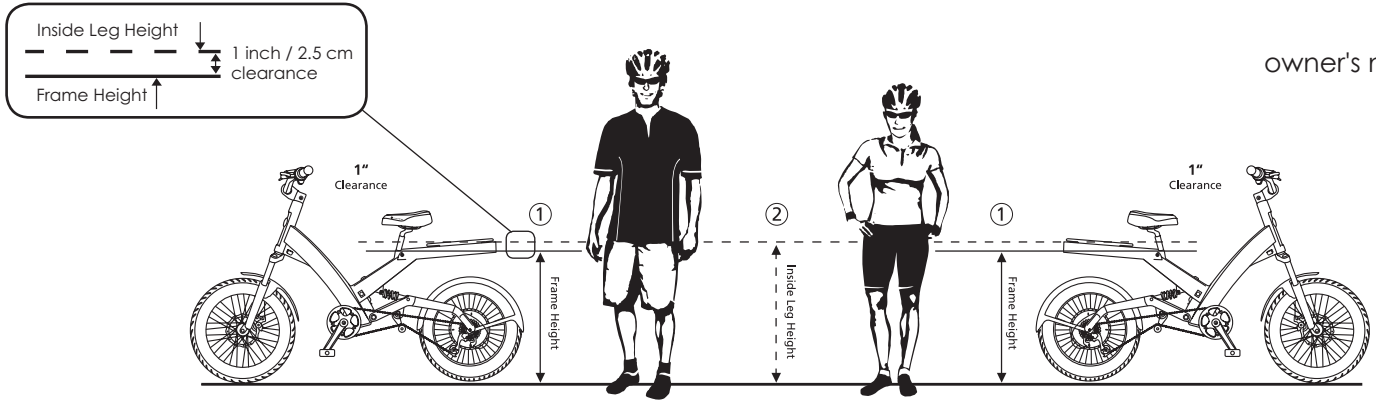
Alternatively, follow the instructions below to adjust the brake lever angle:

1. Loosen the bolt underneath the brake lever with an appropriate allen key.

2. Adjust the angle to suit.

3. Tighten up the bolt underneath, ensuring the brake lever is firmly fixed in place.

ⓘ Should you need to adjust the brakes themselves, please take your A2B to an A2B dealer to make the required adjustments.



4.7 Seat height adjustment

The seat height may require adjustment.
Ask your A2B dealer to adjust it before you ride.

To determine the correct height of the seat for the rider

1. Straddle the assembled A2B with your feet shoulder width apart and flat on the ground.

2. There must be at least 25 mm (1 inch) clearance (1) between the intersection of the main tube and the seat post and (2) the crotch of the rider.

3. The minimum inside leg height is measured from the intersection of the top tube and seat post plus 25 mm and the floor. The minimum inside leg height for the A2B is 68.5 cm (27 inches)

Height adjustmen

1. The seat height can be adjusted with a 5 mm allen key by loosening the seat post fastening bolt.

2. After adjustment, check to ensure the bolt is tightly fastened and ensure there is no movement in the seat position in any direction.

3. The seat post clamp should be secured at 10-12 Nm.

⚠ Failure to correctly secure the seat can result in serious injury or death.

⚠ DO NOT raise the seat beyond the 'minimum insertion' mark on the seat pillar.

⚠ Ensure the seat clamp bolt (seat pillar - seat post) is tightened to 27 Nm.

4.8 Pre-load adjustment rear shock absorber

Adjust the pre-load of the rear shock absorber according to your weight. To increase the pre-load turn the lower part of the shock absorber clockwise. To decrease the pre-load turn the lower part of the shock absorber anti-clockwise.

⚠ A not correct adjusted pre-loed may result in interference between the rack battery and the rear fender.

4.9 Rear view mirror adjustment

Mount your A2B and align the the front wheel to straight direction. Look at the rear mirror and adjust the mirror, so that you can see what is behind you.

⚠ A correct adjusted rear view mirror is essential to watch the traffic behind of you. A not correct adjusted mirror is potentially resulting in serious injury or death and property damage.

5.0 Understand your A2B

After having read this section, if you are still unsure, please ask an A2B dealer to explain any functions or features that you do not understand before your first ride.

5.1 Overview

The A2B has a 'power on demand' function, this means the motor engages only when the rider twist the throttle.

5.2 Starting and stopping

1. Put your helmet on and select a quiet area away from cars, other cyclists, obstacles or other hazards.

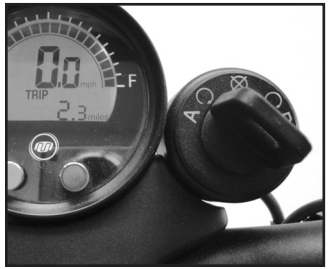
2. Ensure that the power is OFF and raise the kickstand into the riding position.

⚠ Mounting the A2B with the power ON may result in the inadvertent actuation of the throttle and the A2B will lurch, potentially resulting in serious injury or death and property damage. For the same reason, turn the power OFF before dismounting .

⚠ DO NOT sit on the A2B whilst it is supported by the kickstand, you will damage the kickstand, possibly the frame.

3. Mount your A2B and get comfortable.

4. Turn the key to position 'A' or 'B' if an optional battery is attached to turn the battery power ON.



ⓘ The throttle must be in zero position while turning the power ON and will be activated after 2 seconds.

5. To apply motor power twist the throttle on the right hand side of the handlebar gently toward you.

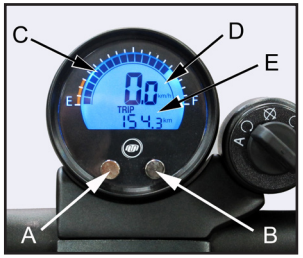
6. Test the brakes at slow speed. Left lever actuates the rear brake and the right lever actuates the front brake. Put your weight toward the rear and gently apply the brakes, rear brake first. Sudden or excessive application of the front brake could throw you over the handlebars. Applying brakes too hard can lock up a wheel, which could cause you to lose control and fall.

ⓘ Remember that there are power cut-off switches embedded in the brake levers. When you apply the brakes, power to the motor will turn OFF. Therefore, do not hold the brake lever(s) when you want the motor to run.

ⓘ Your A2B will provide instantaneous power whether you are pedalling or not. Therefore, there is no need to pedal as you start-up. However, the motor consumes more power during a start from a standing stop than at any other time, even more than climbing a hill. To conserve battery power, and increase your range, pedal during a start from a standing stop to relieve some of the load from the battery.

7. Check out the handling and response of your A2B. Familiarize yourself with how the suspension responds to brake application and rider weight shifts.

5.3 Display



A – Reset button

B – Mode button

C – Battery State-of-Charge Indicator.

D – Speedometer - displays in steps of 0.1 km/h or 0.1 mph

E – Odometer / Tripometer - displays km or miles pedalled, this could be your total or your trip distance measured to 10 meter or 0.01 mile.

- **Switching between Odometer and Tripmeter** - Press the Mode button B

- **Reset Tripmeter** - Switch to TRIP and press the Reset button A for 2 seconds.

- **Setting km/h / mph** - Press the Reset button A and Mode button B for more than 2 seconds to get in the setting mode. Press the Reset button to switch between km/h and mph. Press the Mode button for 2 seconds to return to the normal mode.

5.4 Gears and Shifting

Your A2B has a 7-speed rear derailleur controlled by the twist gear shifter on the left side of the handlebar.

To shift gears, pedal at a steady pace and rotate the shift grip until you find the gear most comfortable for you and the current conditions. To make pedalling easier (when encountering a hill), rotate the grip toward you to down-shift, this will also make you pedal faster to achieve any given speed.

To ride faster (on a flat section or a downhill), rotate the grip away from you to up-shift, allowing you to pedal more slowly for a given speed, but with more effort required.

⚠ Never pedal backward while shifting gears. The chain could derail and you could lose control, resulting in an accident that could cause serious or fatal injury and/or property damage. Always pedal forward at a steady pace when shifting gears.

The 7-speed rear derailleur operates independently of the motor. Using the derailleur control, adjust the gear setting to find a gear that makes pedalling comfortable while assisting the motor

.

5.5 Lights

To switch the light on and off twist the switch on the head light to on or off position.

5.6 Luggage Carrier

Your A2B equipped with a durable luggage carrier. In case you need to carry luggage or any goods with your A2B, please carefully read the enclosed instructions before using the luggage carrier.

1. The luggage carrier is attached to the rack tube of your A2B by 4 x T25x18 torx flat head screws. If you are frequently using the luggage carrier, always check that the screws are secured tightly at torque value 6-8 Nm.

2. The maximum weight that could be carried is 10 Kg.

3. Please ensure that the luggage is fastened securely, so that it can not fall off while riding. Take care that loose straps or other itmes can not get cought by the spokes or wheels while riding.

4. The luggage carrier is not designed for carrying a second rider or an attachment of a child seat. It can also not being used to pull a trailer.

5. The permissible load of your A2B should not be exceeded, please refer to the specification section in the owner's manual.

6. Do not modify the luggage carrier in any case of usage.

7. You need to distribute the weight of your luggage or goods evenly between the two sides of the luggage carrier.

8. Please be aware when the luggage carrier is loaded, your A2B may behave differently, especially when steering or braking the bike.

9. Once you attached your luggage on the luggage carrier, please be aware that rear light and reflector may be obscured by your luggage.

⚠ Failure to observe these instructions can result in serious or fatal injury.

5.7 At the end of your ride

If you have any questions, or if you feel anything about your A2B is not as it should be, ask your A2B dealer before you ride again.

5.8 Recharge your discharged battery

Fully recharge your battery within 3 days if the battery is completely discharged because a lithium ion battery left in a discharged condition deteriorates much faster than a fully charged battery. See 6.2 & 6.3.

5.9 Your range

Factors affecting range:

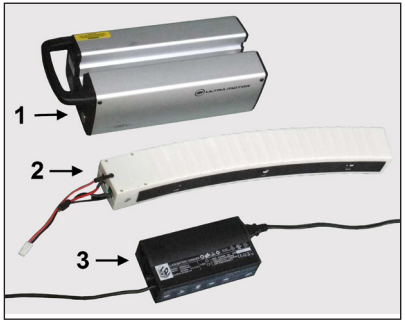
- Battery state-of-charge
- Tire inflation pressure
- Front wheel bearings and both brakes (tight bearings or a dragging brake shoe reduces range)
- Rider weight (it takes more energy to accelerate a heavier person)
- Your speed and local wind conditions (range is reduced when travelling fast against a high wind)
- Terrain (travelling on a soft surface or climbing a hill uses more power)
- Lots of starts and stops (full power from a standing start draws the most amperage from the battery)

Maximize your range

- Fully charge your battery before each ride
- Check tire pressure regularly and inflate to 2.8 bar (40 psi) (printed on the tire sidewall)
- Have your A2B serviced periodically to ensure that the front bearings turn freely and both brake discs do not rub the brake shoes when they are not applied
- Minimize the weight that you carry
- Ride at slower speeds
- Accelerate more slowly and pedal as you accelerate to your cruising speed
- Keep the chain and derailleur lubricated with bicycle recommended chain spray

6.0 Battery use, storage and disposal

6.1 The battery & charger



1. Rack battery

2. Down tube battery

3. Battery charger

Use only the battery supplied with your A2B or a battery provided by Hero Eco as a replacement for the battery supplied with your A2B. Use of any battery not supplied with your A2B WILL void the warranty and may cause damage to the electrical system and the hub motor.

Improper use and poor storage of this battery will void the warranty and may cause serious or fatal injury or other hazardous situation including fire and property damage.

Improper use includes: using this battery with any other vehicle or appliance, subjecting the battery to intense physical shock or severe vibration, creating a short circuit of the discharge terminals of the battery.

Poor storage includes: storing near excessive heat and/or open flames, long term exposure to sunlight.

Use only the battery charger supplied with this battery. Use of any other battery charger will void the warranty and may cause damage to the battery, serious or fatal injury and/or other hazardous situation.

Improper use of this battery charger battery will void the warranty and may cause serious or fatal injury or other hazardous situation including fire and property damage.

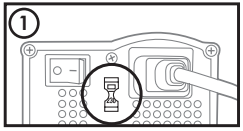
Improper use includes: blocking the fan vent on the charger while the battery is charging as this will cause overheating, subjecting it to intense physical shock or severe vibration.

This battery charger supplied with this battery is for INDOOR use only.

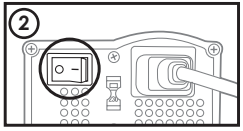
Avoid any contact with water or other fluids. If the battery, charger or any connections become wet, immediately unplug the charger and thoroughly dry all components prior to charging the battery.

6.2 Charging the battery

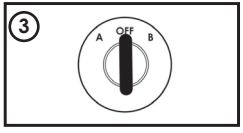
Your A2B dealer should provide a fully charged battery upon delivery of your A2B, should this not be the case, please ensure that prior to its first use, you charge the battery supplied with your A2B for at least 12 hours.



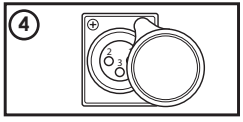
1. Check the Voltage Selector switch on the charger to ensure that it is set to your local voltage (115 V forUS).



2. Plug the charger into the wall outlet, ensuring the charger is turned OFF.



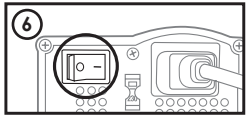
3. Ensure that the battery Power Switch is switched OFF before connecting the charger to the battery.



4. Rotate the charger port cover to expose the charger socket.

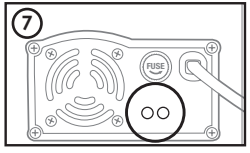
5. Carefully align the connector pins and connect the charger to the battery by plugging the connector into the charger socket.

6. Turn ON the charger using the ON/OFF switch on the charger.



7. LED Indications:

- The Power LED will illuminate RED when the charger is plugged into a wall outlet and the ON/OFF switch is in the ON position.



- The Indicator LED will illuminate AMBER while the charger is charging the battery.
- The Indicator LED will change to GREEN when the battery is fully charged.

8. When charging is complete (the Indicator LED is GREEN), turn OFF the charger using the ON/OFF switch on the charger.

9. Unplug the charger from the wall outlet then carefully unplug the charger from the battery pack by pulling the connector out of the charger socket.

10. Rotate the charger port cover clockwise or counter clockwise to cover the charger socket.

11. Your battery is now ready for use.

ⓘ NOTE: The battery will not take a charge if you connect the battery when the charger is switched on.

6.3 Battery charging

Charging times	**Hours**
Before using battery for first time	12
Fully discharged	4 - 6

To maximize battery life, recharge as soon as possible after every use.

⚠ Avoid leaving the battery charger ON and plugged into your battery for more than 12 hours at a time. Once the battery is fully charged, turn OFF the charger and unplug it from the pack.

ⓘ Avoid charging the battery at a temperature lower than 0 °C or over 40 °C. If possible charge the battery at room temperature.

6.4 Low battery charge

The motor controller and battery management system (BMS) are designed to turn off the power to the motor when the voltage of the battery drops to a predetermined point. This is to protect the battery from the harmful effects of over-discharge.

The low battery charge symbol will turn on if the remaining capacity is lower than 10%.

When the power turns off due to a low battery, plug the battery into the charger supplied with your A2B to recharge the battery within 3 days. It will take 4 - 6 hours to fully recharge a completely discharged battery.

If you have any questions about this battery or its usage, contact our Customer Services Department.

⚠ Never attempt to use remaining power once the BMS has switched off the battery. You will damage your battery.

⚠ Fully recharge your battery within 3 days if the battery is completely discharged because a lithium ion battery left in a discharged condition deteriorates much faster than a fully charged battery. See 6.2 & 6.3.

6.5 Battery storage

Disconnect the battery from the bike and store the battery in a cool (50°-70°F, 10°-21°C), dry place. Avoiding exposure to direct sunlight.

The Battery Management System (BMS) is always on, consuming a small amount of power from the battery. Make sure that the power switch on the battery is switched off when not in use including when the A2B is parked. If the battery pack is not used for an extended period of time, this will eventually drain the battery resulting in permanent damage.

Charging instructions for storage	Hours
Before storing battery – half charge	2
Half re-charge at least every 30 days of storage	2

Failure to follow these battery storage charging instructions will void the warranty.

⚠ Ensure the battery is switched off before storage.

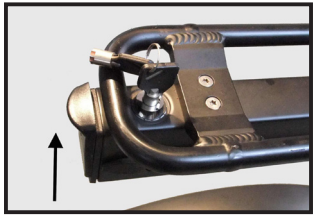
ⓘ You may recharge the battery at any time, regardless of its state-of-charge. As your battery ages, it will gradually lose capacity. With proper care and maintenance, your battery will retain up to 80% of its capacity over at least 500 discharge/recharge cycles. As capacity diminishes, you will notice a gradual drop-off in maximum range capability. When range falls to an unacceptable level, contact your A2B dealer for a replacement battery.

6.6 Battery disposal

DO NOT dispose of the battery as household waste. Dispose of, or recycle according to local authority guidelines or contact our Customer Services Department for guidance.

6.7 Attaching and connecting the rack battery to your A2B

Prior to its first use, charge the battery supplied with your A2B for at least 12 hours.

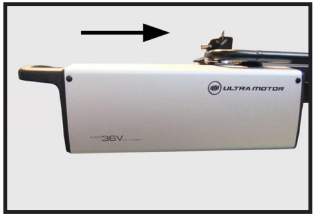


1. Insert the key and unlock the fastener.

2. Raise the fastener.

3. With the fastener in the open position, align the battery with the mounting rails and slide into position.

4. Press the fastener down then secure the battery by locking the fastener into position. Remove the key.



5. Connect the battery to the A2B via the large 6 pin connector. Carefully align the tab and pins of the connector to the socket on the battery and plug in. Tighten onto the thread.

6. To use the battery ensure that the battery is switched on. The switch is on the back of the battery.

7.0 Important Pre-ride Safety Information

Ensure that you and your A2B are both ready for safe and enjoyable use.

ALWAYS wear an approved bicycle helmet. If you lend your A2B to someone else – make sure you also lend them an approved helmet.

NEVER carry a passenger. Overloading your A2B with a second rider can lead to severe injury or death.

OBEY all traffic laws. Always ride on the correct side of the road, with and not against the flow of traffic.

Watch out for car doors. Be aware of the possibility of car doors opening into your path.

Be extra careful in wet conditions. In wet conditions it might take double or triple the distance you need to stop your A2B. Ride slower, anticipate your stops and apply the brakes earlier. Wet roads are slippery – take corners carefully.

Make sure you are seen. In poor light conditions and at night, wear light coloured clothing, preferably with reflective strips.

Ride attentively. Watch out for both moving and stationary vehicles.

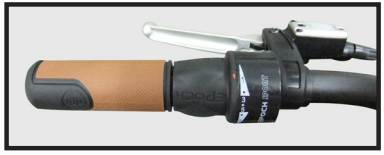
Check your A2B before every ride.

Do a 'walk around' of your A2B before every ride checking brakes, tires and the tightness of all the important fasteners. Have your A2B checked by an A2B dealer at LEAST once a year. Your safety depends on the roadworthiness of your A2B.

Reflectors. Your A2B has side and rear reflectors to make you more visible at night. Ensure they are in place, properly positioned and clean before each ride.

Lights. Your A2B has a front light and rear tail light to make you more visible at night. Ensure they are functional and clean before each ride.

Brakes. Check your brakes before each ride. Left brake lever actuates the rear brake and the right brake lever actuates the front brake.



Brake Pads. When checking your brakes, it is important to check the full brake system. Brake Pads are subject to normal wear and tear and over time wear down. Brake pads should never be worn down to their limit. Ask your A2B dealer to check and replace brake pads.

Pedals. Ensure that your pedals are properly installed and tight before each ride.

⚠ **Saddle.** Ensure that your saddle is properly adjusted and tight before each ride (see 4.7).

⚠ **Handle bar and bar stem.** Ensure that your handle bar and bar stem is properly adjusted and tight before each ride (see 4.3).

Tire pressure. Your A2B features heavy duty inner tubes to help avoid flat tires. However, tires normally lose pressure over time. An under inflated tire can cause premature tire failure, and will require significantly more energy (electric and human) to propel your A2B. Low tire pressure will significantly reduce the range under electric power. The recommended tire pressure for the front and rear wheel is 2.8 bar (40 psi).

⚠ **Quick release.** Make sure that your front wheel quick release is properly adjusted and tight. Failure to properly adjust and lock your front wheel quick release may result in the wheel falling off while you are riding which could result in serious or fatal injury and/or property damage. If you are uncertain about any aspect of the assembly and adjustment of your A2B, ask your A2B dealer.

Rear view mirror. Your A2B has a a rear view mirror to enable you to watch the traffic behind you. Ensure the mirror is adjusted correctly and clean before each ride.

Battery. Check the display prior to setting off on your journey to ensure the battery has enough charge to easily last your journey.

ⓘ If you don't understand any aspect of the use and care of your A2B, ask your A2B dealer.

8.0 Maintenance

Have your A2B checked by an A2B dealer at least once a year.

8.1 Wheels

The front and rear wheels should be centred in the fork and frame. Wheels should be checked regularly for proper spoke tension and rim alignment. DO NOT ride your A2B if it has broken or missing spokes. Wheels should rotate smoothly without wobbling from side-to-side or up-and-down.

8.2 Hub bearings

Check the hub bearing adjustment periodically by lifting the wheel off the ground and spinning it and try to move the rim from side-to-side between the fork or frame. No lateral movement should occur. If you detect lateral movement in either wheel, the hub bearings must be adjusted or replaced.

8.3 Wheel rims

The rims must be smooth, without cracks, bulges or flat spots. Take your A2B to an A2B dealer or qualified bicycle mechanic to repair and/or adjust your wheels if necessary.

8.4 Drive chain

Your A2B has a high quality chain that needs to be cleaned and lubricated regularly with bicycle industry approved synthetic lubricant.

8.5 Brakes

Check cables or oil pipes for signs of wear and fraying. If your A2B is equipped with hydraulic disc brakes additionaly check for signs of oil leakage.

Squeeze the brake lever firmly and check for proper brake function.

Ensure rotors are free of foreign substances and oils.

Brake pads should never be worn down to their limit, replace as necessary.

Should your brake pads appear to be worn down or your brakes are not as responsive as they used to be, ask your A2B dealer to check and replace brake pads.Brakes lose effectiveness when wet.

Avoid riding in wet weather. If it is unavoidable, remember that stopping your A2B will require extra distance.
Ride more slowly, keep a greater interval between yourself and other traffic, and begin braking sooner than normal.
Failure to take these precautions could lead to an accident causing serious or fatal injury and/or property damage.
If you are uncertain about any aspect of the brake operation under any condition, ask your A2B dealer.

⚠ Brake disks and brake linings must be free of oil and grease.

8.6 Tires

Check tiress for any damage, cracking, unusual or excessive wear. The tire should be properly seated in the rim and the fit of the tire bead in the rim should be periodically checked. Check for foreign objects in the tire tread and that the valve stem is straight in the rim.

Damaged or worn tires should be replaced immediately. Take your A2B to an A2B dealer or a qualified bicycle mechanic to repair and/or replace your tires if necessary.

In the unlikely event of having a flat tire you need to know the correct procedure for removing and re-installing the front or rear wheel.

⚠ The tire must have at minimum a positiv profil of 1 mm by law.

8.7 Removing and re-installing wheels

Removing front wheel

1. Release the front hub quick release by rotating the quick release lever away from the hub until it is fully open.

2. Turn the adjusting nut on the opposite side of the hub from the quick release lever ANTI-CLOCKWISE until the nut and quick release lever body clears the safety protrusions on the fork tip.

3. The front wheel can now be removed form the bike.

Re-installing front wheel

1. Position the wheel in the front fork so that the quick release lever is located on the left side of the front fork.

2. Move the quick release lever to the OPEN position (lever curves away from the hub) and position the wheel in the front fork so that the axle is located in the fork drop-outs.

3. Turn the adjusting nut on the right side of the hub clockwise such that you feel resistance to closing the lever when the lever is parallel to the centreline of the hub.

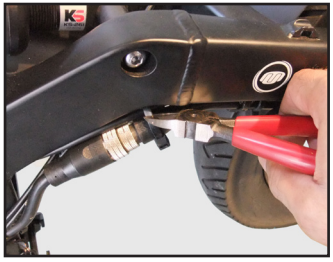
4. Firmly grip the fork with your left hand, and push the lever until it is at a 90° angle to the centreline of the hub. The lever is securely tightened when it takes a significant amount of force to position it in the closed position. The appropriate amount of force necessary to close the lever when it is properly adjusted will result in an imprint of the lever in the palm of your hand. Once closed, the OPEN designation on the lever will no longer be visible. When properly closed, it is impossible to move unless you open it again by reversing the steps above. If you can easily move it, open the quick release lever and tighten the adjusting nut another 180° and try again.

⚠ Please follow the instructions provided for the quick release mechanism to ensure proper use. Failure to properly install this quick release front hub may result in the front wheel falling off while you are riding. This could result in serious or fatal injury and/or property damage. If you are uncertain about any aspect of the assembly and adjustment of your A2B, ask your A2B dealer.

5. Ensure that the brake disc is correctly inserted into the brake calipers and is correctly adjusted.

⚠ If you are unsure about this brake set-up and adjustment procedure, please take your A2B to your A2B dealer or any qualified bicycle mechanic, and ask for assistance in adjusting the brakes. Improperly adjusted brakes may cause reduced braking performance, leading to an accident that could result in serious injury or death and property damage. DO NOT ride your vehicle if you are not confident that the brakes are working properly.

Removing rear wheel



1. Ensure that the power is turned OFF and remove the key.

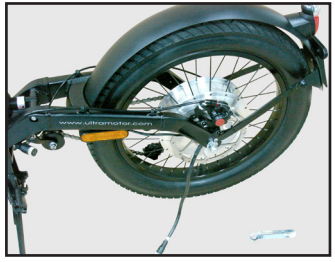
2. Remove the cable ties holding the power cable to the frame located on left hand chain stay.

3. Disconnect the motor power connector by unscrewing the cap nut.

4. Using a 19 mm spanner, loosen and remove the hub axle nuts.

5. Loosen and remove the torque arms retention bolt from the right and left drop out.

6. Remove the torque arms from the A2B by sliding them off the axle.



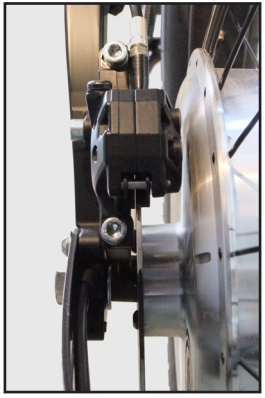
7. Remove the rear wheel by sliding it out of the frame while disengaging the chain from the freewheel.

Re-installing rear wheel

Reverse the removal instructions (7 -1) opposite.

⚠ Re-install the torque arm. Failure to do so will result in damage to the frame.

ⓘ Ensure that the rear wheel is properly centred in the frame before securely tightening the axle nuts to 60 Nm.



⚠ Ensure that the brake disk is correctly inserted in the brake calliper, and the wheel rotates freely without interference from the brake shoes.

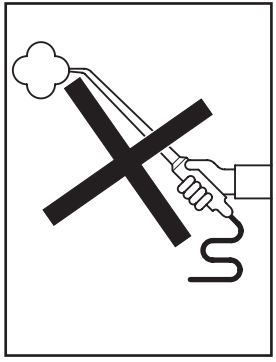
Ensure correct replacement of the chain on the front and rear chain rings.

Reconnect the motor power connectors.

Cable tie both motor cables to the frame.

⚠ If you are unsure about this brake set-up and adjustment procedure, please take your A2B to your A2B dealer and ask for assistance in adjusting the brakes. Improperly adjusted brakes may cause reduced braking performance, leading to an accident that could result in serious or fatal injury and/or property damage. DO NOT ride your A2B if you are not confident that the brakes are working properly.

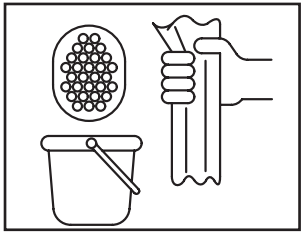
9.0 Cleaning



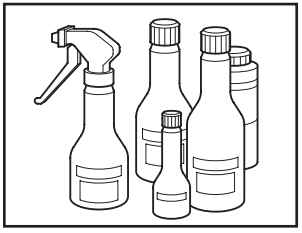
ⓘ Rubber and plastic parts will be damaged by caustic or penetrating cleaning agents or solvents.

⚠ Always carry out a brake test after cleaning and before starting a ride!

⚠ Do not use steam or high-pressure jet devices!
Such devices can damage seals, the battery and electrical system.



- To wash the A2B, use a soft sponge and clean water.
- Afterwards, dry off with a polishing cloth or chamois.
- Do not wipe off dust or dirt with a dry cloth, to avoid scratching the paint or covering.



ⓘ Never use paint-polishing agents on plastic parts.

- After a longish ride, thoroughly clean the A2B and preserve it with a commercially available anti-corrosion agent.

ⓘ Protect the environment by using only environmentally friendly preservation agents,and use them frugally.

Use of the A2B in the winter can cause considerable damage due to the presence of salt on the roads.

ⓘ Do not use hot water, which would in crease the effect of the salt.
- At the end of each ride, wash the A2B with cold water.
- Thoroughly dry the A2B.
- Treat parts liable to corrosion with wax borne anti-corrosion agents.

10.0 Trouble Shooting

No power? Here are some solutions. If they do not solve your problem ask an A2B dealer for help.

Problem	Possible cause(s)	Solution
A2B does not turn on	1. Dead battery	Recharge battery. See 6.2 and 6.3
	2. Key switch is not in power on position	Switch on the key switch / battery
A2B turns on, but motor does not run (display illuminates and state-of-charge indicator shows a charged battery)	1. A brake lever is applied	Do not apply the brakes when starting the vehicle. Make sure brake levers are fully forward
	2. The motor power connector is unplugged	Ensure motor power connector is securely connected
A2B turns on, but if turning the throttle the motor does not turn on	1. System is not yet activated	Wait 2 seconds before twisting the throttle
Motor power is decreasing while climbing uphill	1. Motor temperature is getting too high	Support the motor by pedaling and let the motor cool down

11.0 Technical Information

General performance specification

- Overall dimensions: 1790 mm x 695 mm x 1105 mm
- Tyre size: 3.0" x 20"
- Frame size: unisex 49 cm (19")
- Curb weight without battery: 33.9 kg (74.7 lb)
- Curb weight with battery: 37.2 kg (82.0 lb)
- Maximum permitted load: 140 kg (310 lb)
- Maximum permitted load on rear carrier: 10 kg (22 lb)
- Maximum speed in "on road mode", flat level ground, motor power only: 32 km/h (20 mph) **NOTE:** regulated
- Maximum range, flat level ground, motor power only, no starts/stops: approx. 32 km (20 miles)
- Hill climbing capability, motor power only, 75 kg (165 lb) rider, 37.2 kg (82.0 lb) bike, total 112.2 kg (247.4 lb): 5°
- Operation conditions: Temperature +23 °F to 104 °F (-5 to 40 °C), maximum humidity 80%

Electrical specification, battery

- Battery chemistry: lithium ion
- Configuration: 10S6P
- Nominal voltage: 36V
- Normal voltage operating range: 31 to 41V
- Nominal capacity: 11.4 Ah (410 Wh)
- Maximum discharge: 30 A
- Charging method: CC/CV (Constant current/ Constant voltage)
- Weight: 5,9kg

Battery management system (BMS)

- Controls and stops over-charging
- Controls maximum charge current
- Controls over-discharge amperage (30 A max)
- Controls over-discharge voltage
- Over temperature shut-off
- Provides cell-to-cell balancing function

Electrical specification, battery charger

- Input voltage: AC 115/230V, 50/60Hz
- Output voltage: 42 ± 0.5 VDC
- Output amperage: 4.0 ± 0.4A
- AC line fuse rating: 10 A

Electrical specification, motor

- Motor type: brushless, gearless
- Motor voltage rating: 36-volts
- Maximum power output: 800 W
- Continuous power output: 500 W
- Maximum torque: 50 Nm

Electrical specification, motor controller

- Control function: current, voltage, temperature, recuperation, speed, torque, dynamofunction motor
- Power supply light: 6 V, 7 W
- Position: end of down tube

12.0 Warranty & Security Details

A2B Warranty (the "Warranty")

1. DEFINITIONS

The following definitions in this clause apply in the Warranty:

Goods means:	In relation to the A2B: the frame; the motor system (motor and controller); the lithium ion battery; and all other components of the A2B except for the tires, tubes and brake pads.
A2B means:	Light electric vehicle manufactured and distributed by Hero Eco.
Time Periods means:	For the frame, five year on the A2B; For the motor system (motor and controller), two years from the date of delivery of the A2B to you; For the lithium ion battery, one year from the date of delivery of the A2B to you; For the charger, 90 days from date of sale For all other components of the A2B except for the tires, tubes, brake pads and grips, one year from the date of delivery of the A2B to you.
Hero Eco means:	Hero Eco Ltd.
You, Your means:	The original purchaser of the A2B from an authorized A2B dealer.

2. WARRANTY

2.1 Hero Eco warrants that on delivery of the A2B to You and for the Time Periods, the Goods shall:

2.1.1 conform in all material respects with their description subject to any qualification or representation contained in the brochures, advertisements or other documentation;

2.1.2 be of satisfactory quality;

2.1.3 be fit for any purpose Hero Eco says the Goods are fit for or for any reasonable purpose for which You use the Goods;

2.1.4 be free from material defects in design, material and workmanship; and

2.1.5 comply with all applicable statutory and regulatory requirements for selling the Goods in Europe.

2.2 This Warranty is in addition to Your legal rights in relation to Goods which are faulty or which otherwise do not conform with the terms of the Warranty.

2.3 This Warranty does not apply to any defect in the Goods arising from:

2.3.1 fair wear and tear;

2.3.2 wilful damage, accident or negligence by You or any third party;

2.3.3 Your A2B having been assembled by someone other than Hero Eco or an authorised A2B dealer;

2.3.4 if You use the Goods in a way that Hero Eco does not recommend, including, but not limited to, using the A2B for commercial activities or in competitive events or training for such activities or events;

2.3.5 Your failure to follow our instructions, including, but not limited to, the owner's manual; or

2.3.6 any modification, alteration or repair You carry out without Hero Eco's prior written approval.

2.4 The Warranty applies to any repaired or replacement Goods that Hero Eco supply to You in the unlikely event that the original Goods are faulty or do not otherwise conform with the Warranty.

3. DEFECTIVE GOODS AND RETURNS

3.1 In the unlikely event that the Goods do not conform with the Warranty, please let Hero Eco know as soon as possible after delivery by contacting an authorised A2B dealer or Hero Eco via our website weareA2B.com.

3.2 Hero Eco will ask You to return the A2B together with proof of purchase to an authorised A2B dealer and once Hero Eco has checked that the Goods are faulty, Hero Eco will at its sole discretion:

3.2.1 provide You with a full or partial refund in relation to the faulty Goods; or

3.2.2 replace the faulty Goods; or

3.2.3 repair the faulty Goods.

4. LIMITATION OF LIABILITY

4.1 Subject to clause 4.2, if either You fail or Hero Eco fails to comply with this Warranty, neither shall be responsible for any losses that the other suffers as a result, except for those losses which are a foreseeable consequence of the failure to comply with this Warranty.

4.2 Neither You nor Hero Eco shall be responsible for losses that result from Hero Eco's failure to comply with this Warranty including, but not limited to, losses that fall into the following categories:

4.2.1 loss of income or revenue;

4.2.2 loss of business;

4.2.3 loss of anticipated savings;

4.2.4 loss of data; or

4.2.5 any waste of time.

4.3 However, clause 4.2 shall not prevent claims for foreseeable loss of, or damage to, Your physical property.

4.4 This clause does not include or limit in any way Hero Eco's liability for:

4.4.1 death or personal injury caused by Hero Eco's negligence; or

4.4.2 fraud or fraudulent misrepresentation; or

4.4.3 any other matter for which it would be illegal or unlawful for Hero Eco to exclude or attempt to exclude Hero Eco's liability.

13.0 Disposal

We at A2B support the proper disposal and recycling of our products. Please dispose of your vehicle and associated components at your local recycling facility. A2B will arrange for the proper disposal, when requested.

Owner registration

Fill out and return your owner registration card immediately so that you may receive important product information in the future. Thank you.

Your A2B and certain key components have unique serial numbers. Record these serial numbers for warranty purposes or in case your vehicle is ever lost or stolen.

Vehicle serial number is located on the right side of the steering tube:

Vehicle serial number: _____

Motor serial number is engraved to the left side of the motor hub:

Motor serial number: _____

Battery number is located on the end cover of the battery.

Battery serial number: _____

Record this other important information:

Date of purchase: _____

Selling dealer: _____

Street address: _____

City / State / Zip: _____

Telephone: _____

Sales person: _____

Please keep this information in a safe place for future reference.

⚠ To fully protect your A2B against theft, buy a high quality bicycle lock and chain. Secure your A2B to a stationary object every time it is left unattended and also lock your front and rear wheel and motor to the frame.

Hero Eco

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